

REMARKS

Claims 1-18 were examined and reported in the Office Action. Claims 1-18 are rejected. Claims 1-18 are canceled. New claims 19-39 are added. Claims 19-39 remain.

Applicant requests reconsideration of the application in view of the following remarks.

I. 35 U.S.C. §103(a)

It is asserted in the Office Action that claims 1-18 are rejected under 35 U.S.C. §103(a) as being unpatentable over U. S. Patent 5,704,403 issued to Schewenk et al ("Schewenk") in view of (U. S. Patent 6,039,442 issued to Hagiwara et al ("Hagiwara"). Applicant respectfully traverses the aforementioned rejection for the following reasons.

According to MPEP §2142 "[t]o establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure." (In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)). Further, according to MPEP §2143.03, "[t]o establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. (In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). " *All words in a claim must be considered* in judging the patentability of that claim against the prior art." (In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970), emphasis added.)

Applicant's new claim 19 contains the limitations of "[a]n apparatus for refilling a printer cartridge, said apparatus comprising: ... a one way valve on the ink draw off conduit between (i) the ink replenishment cartridge dock and (ii) the circuit and the ink draw off conduit, the valve favouring flow to the ink replenishment cartridge dock, and a one way threshold valve on the circuit, wherein a flow system arising from the apparatus is operable in the following modes, (a) an ink draw off mode with the pump operating in a first direction to take ink from within the docked printer cartridge into the ink receiver of the docked ink replenishment cartridge, the draw off mode not involving flow via said one way valve on the circuit, (b) an ink supply mode with the pump operating in a second direction to supply ink from within the docked ink replenishment cartridge into the docked printer cartridge, and an ink re-routing mode with the pump operating in the second direction to re-route ink taken into the flow system from within the docked ink replenishment cartridge in mode (b) operation, the re-routing to: cycle ink in the conduit when over a threshold pressure of and via the one way threshold valve on the circuit, discharge ink into the ink receiver when over a threshold pressure of a one way threshold valve on the ink draw in circuit, via one of both said one way threshold valves and both (1) and (2)."

Applicant's new claim 29 contains the limitations of "[a] system comprising: (A) an apparatus for refilling a printer cartridge, (B) an ink replenishment cartridge, (C) an ink receiver, and optionally, (D) a printer cartridge, wherein the apparatus (A) for refilling a printer cartridge includes: ... a one way valve on the ink draw off conduit between (i) the ink replenishment cartridge dock and (ii) the circuit and the ink draw off conduit, the valve favouring flow to the ink replenishment cartridge dock, and a one way threshold valve on the circuit, wherein a flow system arising from the system is operable in the following modes: (a) an ink draw off mode with the pump operating in a first direction to take ink from within the docked printer cartridge into the ink receiver of a docked ink replenishment cartridge, the draw off mode not involving flow via said one way valve on the circuit, (b) an ink supply mode with the pump operating in a second direction to supply ink from within a docked ink replenishment cartridge into a docked printer cartridge, and an ink re-routing mode with the pump operating in the

second direction to re-route ink taken into the flow system from within a docked ink replenishment cartridge in mode (b) operation, such re-routing to: (1) cycle ink in the circuit when over a threshold pressure of and via the one way threshold valve on the circuit, (2) discharge ink into the ink receiver when over the threshold pressure of both one way threshold valves or (3) both (1) and (2)."

Applicant's new claim 32 contains the limitations of "[a] method of refilling a printer cartridge comprising: using a system for refilling the printer cartridge, the system including: ... an ink draw off conduit adapted to connect the printer cartridge when docked to the ink receiver, said conduit having two same direction one way valves each favouring flow from the dock for the printer cartridge to the dock for the ink receiver, an ink replenishment draw in conduit to connect the ink replenishment outlet to the ink draw off conduit, the ink replenishment cartridge and/or the ink replenishment draw in conduit adapted to allow or favour only draw off flow from the ink replenishment outlet of the ink replenishment cartridge, a circuit completing conduit and at least part of the ink replenishment draw in conduit to connect the ink draw off conduit to the printer cartridge when docked, a pump operable to pump in either direction on the circuit defined in part by at least part of the ink draw off conduit and in part by at least part of the circuit completing conduit, (I) dock connecting: ... (II) using the apparatus by: (a) drawing off at least some of any ink from within the ink reservoir of the printer cartridge and passing that fluid into the ink receiver, (b) supplying ink from the ink supply reservoir of the ink replenishment cartridge into the ink reservoir of the printer cartridge, and (c) halting flow of ink to the ink reservoir of the printer cartridge when (i) the ink replenishment cartridge is empty of ink, and (ii) the ink reservoir of the printer cartridge is full of ink, wherein halting of the supply of ink, when the ink reservoir of the printer cartridge is full includes one of diverting and cycling, in the conduit, ink already taken from within the ink replenishment cartridge."

Applicant's claimed invention addresses the difficulties in refilling ink cartridges including the issue of air being introduced while refilling the cartridge.

Schewenk discloses an ink cartridge-refilling device having a reversible pump (40) and connecting a replenishing cartridge (20) with a docked ink cartridge (105). The docked ink cartridge (105) via its ventilation opening (102) is also connected to a receptacle container (60). Schewenk, however, does not disclose the use of valves to control the flows between the replenishing cartridge (20), docked ink cartridge (105) and receptacle container (60). That is, Schewenk does not teach, disclose or suggest "an ink re-routing mode with the pump operating in the second direction to re-route ink taken into the flow system from within a docked ink replenishment cartridge in mode (b) operation, such re-routing to: (1) cycle ink in the circuit when over a threshold pressure of and via the one way threshold valve on the circuit, (2) discharge ink into the ink receiver when over the threshold pressure of both one way threshold valves or (3) both (1) and (2)."

Hagiwara discloses an electrostatic ink jet recording device having a bypass tube to circulate ink while bypassing to obtain a uniform concentration of toner in the ink. While Hagiwara uses valves for flow control the use of valves is in relation to an printer ink cartridge having a reservoir to obtain uniform toner in the ink, Hagiwara is not concerned with ink cartridge reservoir refilling. Hagiwara does not teach, disclose or suggest an apparatus, a system or a method for refilling an ink cartridge using docks and conduits and "an ink re-routing mode with the pump operating in the second direction to re-route ink taken into the flow system from within a docked ink replenishment cartridge in mode (b) operation, such re-routing to: (1) cycle ink in the circuit when over a threshold pressure of and via the one way threshold valve on the circuit, (2) discharge ink into the ink receiver when over the threshold pressure of both one way threshold valves or (3) both (1) and (2)."

Moreover, by viewing the disclosures of Schewenk and Hagiwara, one can not jump to the conclusion of obviousness without impermissible hindsight. According to MPEP 2142, [t]o reach a proper determination under 35 U.S.C. 103, the examiner must step backward in time and into the shoes worn by the hypothetical 'person of ordinary skill in the art' when the invention was unknown and just before it was made. In view of all factual information, the examiner must then make a determination whether the

claimed invention 'as a whole' would have been obvious at that time to that person. Knowledge of applicant's disclosure must be put aside in reaching this determination, yet kept in mind in order to determine the 'differences,' conduct the search and evaluate the 'subject matter as a whole' of the invention. The tendency to resort to 'hindsight' based upon applicant's disclosure is often difficult to avoid due to the very nature of the examination process. However, impermissible hindsight must be avoided and the legal conclusion must be reached on the basis of the facts gleaned from the prior art." Applicant submits that without first reviewing Applicant's disclosure, no thought, whatsoever, would have been made toward an apparatus, a system or a method for refilling an ink cartridge using docks and conduits and "an ink re-routing mode with the pump operating in the second direction to re-route ink taken into the flow system from within a docked ink replenishment cartridge in mode (b) operation, such re-routing to: (1) cycle ink in the circuit when over a threshold pressure of and via the one way threshold valve on the circuit, (2) discharge ink into the ink receiver when over the threshold pressure of both one way threshold valves or (3) both (1) and (2)."

Since neither Schewenk, Hagiwara, nor the combination of the two teach, disclose or suggest all the limitations of Applicant's new claims 19, 29 and 32, as listed above, there would not be any motivation to arrive at Applicant's claimed invention. Further, this nothing disclosed in either document to suggest using valves in a reservoir bypass system that only re-circulates to the same reservoir for toner consistency. Thus, Applicant's new claims 19, 29 and 32 are not obvious over Schewenk in view of Hagiwara since a *prima facie* case of obviousness has not been met under MPEP §2142. Additionally, the claims that directly or indirectly depend from new claims 19, 29 and 32, namely claims 20-28, 36 and 37, 30-31 and 38, and 33-35 and 39, respectively, would also not be obvious over Schewenk in view of Hagiwara for the same reason.

Accordingly, withdrawal of the 35 U.S.C. §103(a) rejection for claims 1-18 are respectfully requested.

CONCLUSION

In view of the foregoing, it is believed that all claims now pending, namely 19-39, patentably define the subject invention over the prior art of record and are in condition for allowance and such action is earnestly solicited at the earliest possible date.

If necessary, the Commissioner is hereby authorized in this, concurrent and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2666 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17, particularly extension of time fees.

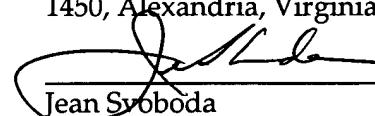
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